

TEROSON MS 939

August 2017

PRODUCT DESCRIPTION

TEROSON MS 939 provides the following product characteristics:

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| Technology | Silane-modified polymer |
| Product Type | Adhesive/Sealant |
| Components | One-component |
| Cure | Humidity |
| Application | Assembly |
| Appearance | White, Off-white, Grey, Black |
| Consistency | Pasty, Thixotropic |
| Odor | Characteristic |

TEROSON MS 939 is a gun-grade, one-component adhesive/sealant based on silane modified polymers, which cures by reaction with moisture to an elastic product

The skin formation and curing times are dependent on humidity and temperature, and the curing time also depends on joint depth.

By increasing the temperature and moisture these times can be reduced; low temperature as well as low moisture retard the process.

TEROSON MS 939 is particularly sag-resistant leading to a high position tack after matching of the parts to be bonded.

TEROSON MS 939 is free of solvents, isocyanates, silicones and PVC.

It demonstrates good adhesion to many substrates and is compatible with suitable paint systems

The sealant also demonstrates good UV resistance and can therefore be used for interior and exterior applications.

TEROSON MS 939 demonstrates the strength necessary for elastic bonding.

TEROSON MS 939 allows accelerated curing as two-component material

See separate data sheets Teroson MS Power & Speed Technology or Teroson MS 2c-Technology

Application Areas:

TEROSON MS 939 is used for the following applications:

elastic bonding of metals and plastics, e.g. side panelling and bonding of the roof skin in the vehicle and caravan manufacture.

elastic, interior and/or exterior seam and joint sealing in the following areas. vehicle body, caravan, railway carriage, container and general metal construction; electrical, plastics, air-conditioning and ventilation industries

TECHNICAL DATA

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| Density, g/cm ³ , white, off-white, grey, black: | approx. 1.5 |
| Sag resistance: | no sagging (DIN profile 15 mm) |
| Skin formation time, min*: | approx. 4 to 10 |
| Cure rate, mm/24 hrs: | approx. 3 |
| Shore-A-hardness (ISO 868, Durometer A): | approx. 55 |
| Tensile strength (acc. to ISO 37), MPa: | approx. 3.0 |
| Elongation at break (acc. to ISO 37, speed 200 mm/min), %: | approx. 250 |
| Stress at 100 % elongation (acc. to ISO 37), MPa: | approx. 1.3 |
| Volume change (acc. to DIN 52451), %: | <2 |
| Paint compatibility: | in principle compatible |
| UV resistance: | no signif. changes |
| UV source: | Osram Vitalux 300W, dry UV |
| Distance to the specimen, cm: | 25 |
| Test period, weeks: | 6 |
| QUV resistance: | no signif. changes |
| QUV source: | QUV weatherometer acc. to DIN 53384-A |
| Test period, weeks: | 6 |
| Reference IEC 61215/61646 clause 10.13: | |
| Damp heat test durability **: given | |
| Test period, hours: | 1,000 |
| Application temperature, °C: | 5 to 40 |
| In service temperature range, °C: | -40 to +100 |
| Short exposure (up to 1 h), °C: | 120 |
| * ISO 291 standard climate: | 23°C, 50% relative air humidity |
| **Damp heat conditions: | 85°C, 85% relative air humidity |

DIRECTIONS OF USE

Preliminary statement:

Prior to use it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed.

Pre-Treatment:

The substrates must be clean, dry, oil- and grease free. Depending on the surface it can be necessary to roughen the surface or to use a primer/adhesion promoter to provide best adhesion

When manufacturing plastics, external release agents are often used; these agents must be accurately removed prior to starting bonding or sealing. Due to the different compositions of paints, especially powder paints and the large number of different substrates, application trials before use are necessary. For cleaning, Cleaner + Diluent TEROSON VR 30, TEROSON VR 10 or TEROSON SB 450 from the Henkel portfolio are suitable

Especially for plastics and coatings - powder coatings - TEROSON SB 450 has to be tested.

When bonding and sealing PMMA, e.g. Plexiglas®, and polycarbonate, e.g. Makrolon® or Lexan®, under tension, stress corrosion cracking may occur. Application trials before use are necessary. There is no adhesion to polyethylene, polypropylene and PTFE. Substrates not mentioned above should be subject to trials

Application:

Application from 290 mL cartridges is made with the TEROSON Hand or Air Pressure Pistols, and from plastic wallets (310 and 570 mL) with the corresponding FK-Hand or FK-Air Pressure Pistols. In the case of compressed air application a pressure of 2 to 5 bar is required

Low material temperatures of the sealant will lead to an increase of viscosity, resulting in a lower extrusion rate. This can be avoided by bringing the sealant up to room temperature prior to application

TEROSON MS 939 can also be applied from hobbocks or drums with high pressure pumps with follower plates.

See separate application directions of Teroson MS products in hobbocks and drums

Cleaning:

For cleaning application equipment contaminated with uncured TEROSON MS 939 we recommend the use of cleaners + diluents TEROSON VR 30 or TEROSON VR 10.

STORAGE

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| Frost-Sensitive | No |
| Recommended storage temperature, °C | 10 to 25 |
| Shelf-life (in unopened original packaging), 12 months | |

ADDITIONAL INFORMATION**Note:**

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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Reference 0.2